

WHAT IS CLAIMED IS:

1. A form processing apparatus for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing apparatus comprising:

setting means for setting a character string for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid; and overlaying means for extracting data of the field data source based on the character string and overlaying the data onto the field.

2. A form processing apparatus for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing apparatus comprising:

reading means for reading a character string set for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid, and overlaying means for extracting data of the field data source based on the character string and overlaying the data onto the field.

3. A form processing method for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing method comprising the steps of:

5 setting a character string for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid; and

10 overlaying the data of the field data source onto the fields by extracting the data based on the character string.

4. A form processing method for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing method comprising the steps of:

20 reading a character string set for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid, and

 overlaying the data of the field data source onto the fields by extracting the data based on the character string.

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5. A program for causing a computer to execute form processing for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the program comprising the steps of:

5 setting a character string for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid; and

10 overlaying the data of the field data source onto the fields by extracting the data based on the character string.

6. A program for causing a computer to execute form processing for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the program comprising the steps of:

15 reading a character string set for each of the fields as field attribute information, the character string being composed of characters indicating a format of data to be overlaid, and

20 overlaying the data of the field data source onto the fields by extracting the data based on the character string.

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7. The program according to claim 5; wherein the character string is composed of type specification characters, skip characters, fixed characters or a combination thereof; the type specification characters
5 indicating how corresponding data in the data of the field data source to be overlaid onto a field should be interpreted; the skip characters indicating that any corresponding data in the data of the field data source to be overlaid onto a field should be skipped; and the
10 fixed characters indicating that corresponding particular data in the data of the field data source to be overlaid onto a field should be skipped.

8. The program according to claim 5; wherein the
15 overlaying step comprises the steps of:
cutting a character string to be sequentially processed from the character string as a picture word;
cutting data of the field data source corresponding to the cut picture word as a field data
20 word; and
determining whether or not the picture word is composed of type specification characters and
generating a data table having a pair of the picture word and the field data word when the picture word is
25 determined to be composed of type specification characters; and

wherein the overlaying step overlays the data of the field data source onto the fields based on the data table.

- 5 9. The program according to claim 8; wherein the field attribute information includes data types indicating kinds of data of the field data source to be overlaid; and

wherein the overlaying step determines whether or
10 not the number of the cut picture words is correct based on the data type, and, if the picture words lack in number, adds the missing picture words and field data words corresponding to the missing picture words, and then complements the added field data words.

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10. The program according to claim 9; wherein the overlaying step determines whether or not the data of the field data source is valid based on the data type, and overlays the data onto the field if the data is
20 valid.

11. A form processing apparatus for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field
25 data source onto the fields in a form; the form processing apparatus comprising:

reading means for reading a character string included in field attribute information set for each of the fields, the character string being composed of characters indicating the format of data to be overlaid;

recognizing means for recognizing, when overlaying the data onto the field, the repetition number of repeatedly overlaying predetermined data from the read character string; and

overlaying means for repeatedly overlaying the predetermined data onto the field based on the recognized repetition number.

12. A form processing apparatus for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing apparatus comprising:

reading means for reading a character string included in field attribute information set for each of the fields, the character string being composed of characters indicating the format of data to be overlaid;

recognizing means for recognizing a character indicating that the data length of the data to be overlaid is variable, from the character string;

calculating means for calculating difference
between the data length derived from the character
string and data length of data of the field data source
to be overlaid onto the field, that is corresponding to
5 the character string; and

overlaying means for overlaying the data of the
field data source onto the field based on data length
of the variable-data-length data recognized by the
recognizing means by determining the data length based
10 on the difference calculated by the calculating means.

13. A form processing method for reading a field data
source storing data to be overlaid onto fields defined
in a form and overlaying the data of the field data
15 source onto the fields in a form; the form processing
method comprising the steps of:

reading a character string included in field
attribute information set for each of the fields, the
character string being composed of characters
20 indicating the format of data to be overlaid;

recognizing, when overlaying the data onto the
field, the repetition number of repeatedly overlaying
predetermined data, from the read character string,;
and

25 repeatedly overlaying the predetermined data onto
the field based on the recognized repetition number.

14. A form processing method for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the form processing
5 method comprising the steps of:

reading a character string included in field attribute information set for each of the fields, the character string being composed of characters indicating the format of data to be overlaid;

10 recognizing a character indicating that the data length of the data to be overlaid is variable, from the character string;

calculating difference between the data length derived from the character string and data length of
15 data of the field data source to be overlaid onto the field, that is corresponding to the character string; and

overlaying the data of the field data source onto the field based on data length of the variable-data-
20 length data recognized by the recognizing step by determining the data length based on the difference calculated by the calculating step.

15. A program for causing a computer to execute form
25 processing for reading a field data source storing data to be overlaid onto fields defined in a form and

overlaying the data of the field data source onto the fields in a form; the program comprising the steps of:

reading a character string included in field attribute information set for each of the fields, the character string being composed of characters indicating the format of data to be overlaid;

recognizing, when overlaying the data onto the field, the repetition number of repeatedly overlaying predetermined data, from the read character string; and repeatedly overlaying the predetermined data onto the field based on the recognized repetition number.

16. A program for causing a computer to execute form processing for reading a field data source storing data to be overlaid onto fields defined in a form and overlaying the data of the field data source onto the fields in a form; the program comprising the steps of:

reading a character string included in field attribute information set for each of the fields, the character string being composed of characters indicating the format of data to be overlaid;

recognizing a character indicating that the data length of the data to be overlaid is variable, from the character string;

calculating difference between the data length derived from the character string and length of data of

the field data source to be overlaid onto the field,
that is corresponding to the character string; and
overlaying the data of the field data source onto
the field based on data length of the variable-data-
length data recognized by the recognizing step by
determining the data length based on the difference
calculated by the calculating step.

17. The program according to claim 15; wherein the
character string is composed of type specification
characters, skip characters, fixed characters,
repetition characters or a combination thereof; the
type specification characters indicating how
corresponding data in the data of the field data source
to be overlaid onto a field should be interpreted; the
skip characters indicating that any corresponding data
in the data of the field data source to be overlaid
onto a field should be skipped; the fixed characters
indicating that corresponding particular data in the
data of the field data source to be overlaid onto a
field should be skipped; and the repetition characters
indicating that corresponding data in the data of the
field data source to be overlaid onto a field should be
overlaid repeatedly.

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18. The program according to claim 17; wherein the repetition character means that α should be n times when expressed as $\alpha(n)$.

5 19. The program according to claim 17; wherein the repetition character means that data length of data corresponding to the repetition character is variable when expressed as $\alpha(0)$.

10 20. The program according to claim 15; wherein the overlaying step comprises:

cutting a character string to be sequentially processed from the character string as a picture word;

cutting data of the field data source
15 corresponding to the cut picture word as a field data word; and

determining whether or not the picture word is composed of type specification characters, and generating a data table having a pair of the picture
20 word and the field data word when the picture word is determined to be composed of type specification characters; and

wherein the overlaying step overlays the data of the field data source onto the fields based on the data
25 table.

21. The program according to claim 20; wherein the field attribute information includes data types indicating kinds of data of the field data source to be overlaid; and

5 wherein the overlaying step determines whether or not the number of the cut picture words is correct based on the data type, and, if the picture words lack in number, adds the missing picture words and field data words corresponding to the missing picture words,
10 and then complements the added field data words.

22. The program according to claim 21, wherein the overlaying step determines whether or not the data of the field data source is valid based on the data type,
15 and overlays the data onto the field if the data is valid.